OFFICE OF THE CHIEF INFORMATION OFFICER

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Before the Subcommittee on Agriculture, Rural Development, Food and Drug Administration and Related Agencies

Introduction

Mr. Chairman and members of the Subcommittee, thank you for the opportunity to share with you our progress on using information technology (IT) to improve service delivery to the customers of the Department of Agriculture (USDA), while at the same time implementing Enterprise Architecture (EA) principles and eGovernment with IT.

The Office of the Chief Information Officer (OCIO) is changing how USDA invests in and uses IT. Instead of single agency-centric systems, we are investing in common government-wide and Department-wide IT solutions. OCIO is leading USDA agency participation in 21 of the 25 government-wide Presidential Electronic Government (eGovernment) initiatives. At the same time, under the framework of the Department's Enterprise Architecture, we are managing USDA IT investments to promote collaboration across common lines-of-business, share/re-use common technology and eGovernment solutions, such as our internal "Smart Choices," and find savings by leveraging the USDA's size/economies-of-scale in Department-wide IT acquisitions.

The President's Fiscal Year (FY) 2006 budget request for OCIO totals about $16.7 million dollars, which is about the same as appropriated in FY 2005. We are requesting an increase of approximately $264,000 to cover an expected rise in pay costs.

USDA'S FY 2006 Information Technology Budget Summary

During the FY 2006 USDA budget preparation process, OCIO staff scrutinized agency IT investment plans to ensure alignment with USDA program delivery plans as well as the USDA Enterprise Architecture. In FY 2006, the Department is requesting about $1.9 billion for information technology. Nearly one third of the proposed total, approximately $607 million, is transferred to the states for automated data processing systems in support of the Food Stamp and the Women, Infants and Children programs, including support for state-run Electronic Benefits Transfer programs. The IT budgets for the individual Service Center Agencies (SCA), which include the Farm Service Agency (FSA), the Natural Resources Conservation Service (NRCS), and the Rural Development (RD) mission area agencies, total approximately $294 million. In addition to the separate SCA agency budgets, the proposed budget includes a request for about $142 million to support the Common Computing Environment (CCE) infrastructure modernization of these agencies and related agency specific needs. The SCA and CCE requests combined total about $436 million, which represents about 23 percent of the USDA IT budget. Additionally, the USDA Forest Service's IT budget of about $322 million comprises another 17 percent of the Department's total. Overall, the IT related proposals in this request represent about 3 percent of the total $65 billion proposed for IT investments for the Federal Government in FY 2006.

Service Center Modernization Initiative – (SCMI)

Mr. Chairman, the modernization of our Service Center Agencies' (SCA) technology infrastructure continues to be one of USDA's highest IT priorities. The CCE initiative is managed by OCIO working in collaboration with the SCA. CCE supports over 50,000 employees, volunteers and partners in the delivery of over $55 billion in programs through our field office delivery system. The new infrastructure is flexible and built around maximizing information sharing both within USDA and with other federal, state and local agencies, the private sector, and USDA customers.

I would like to take a few minutes to update you on our recent accomplishments and current plans deploying the CCE technology, as well as our progress in merging the three SCA IT support staff into a single organization under OCIO.

By the end of 2004, significant accomplishments under this initiative included the following:

- Completed additional network server upgrades to accommodate the expected increase in processing needs once Microsoft SQLServer 2000 and ESRI's ArcSDE are deployed;
- Completed the design of the configuration for the RDBMS and GIS software for the enhanced network servers;
- Fielded Microsoft SQLServer 2000 and ESRI's ArcSDE at an initial 30 pilot sites for Common Land Unit (CLU) applications. The pilots are still continuing, and deployment to the remaining sites is also dependent on FSA's Concurrent Versions System (CVS), currently under revision, which is to be fielded with ArcSDE/SQLServer 2000;

- Implemented Microsoft Operations Manager (MOM), which became operational at the three information technology centers in Kansas City, St. Louis, and Fort Collins, and is yielding significant information which will facilitate operational optimization. MOM is also running on all of the CCE field servers to allow the CCE to centrally monitor those servers, and has been successfully monitoring network traffic. MOM continues to be an important tool in identifying causes of report problems and in problem prevention;
- Completed the procurement and image development of small office servers (ML350s and ML370s), which will enable 5 and 6 person offices to enjoy the full benefits of network connectivity;
- Completed Microsoft Exchange migration of field office personnel. This migration supports a common e-mail system for all field office personnel;
- Completed Software Update Service (SUS) deployment to all State and Field office servers in August with the exception of the 30 sites where ArcSDE and SQLServer 2000 are being piloted. SUS enables automatic security and other software updates to the servers;
- Fielded the McAfee E500 Spamkiller, which significantly reduces unwanted mass e-mail;
- Completed development of an architecture for Microsoft Systems Management Server (SMS) 2003, which provides the robust capabilities that CCE needs for optimal remote management;
- Implemented the Split Domain Name System (DNS) in September. The split DNS design is able to continue DNS service if one of the DNS servers goes down; backup DNS servers automatically route traffic without impact to the network;

- Migrated all CCE workstations in the field from Windows NT to XP or replaced them with new XP machines;
- Awarded a contract for the FY 1999 workstation replacement procurement for a total of 15,694 computers through the NIH ECS III contract vehicle. The computers were manufactured by HP/Compaq in the following quantities for each configuration purchased:
  - Mid-Range Desktops 3,442
  - Laptops 7,084
  - High End Workstations 5,035
  - Tablet PCs (indoor) 133
- Coordinated the various Voice Over IP (VoIP) Pilots across the country, piloting solutions from a variety of vendors, including Sphericall, Cisco, Shoretel (formerly Shoreline) and NEC Unified Solutions, Inc. Completion of the pilots yielded a select list of VoIP technologies and vendors from which the SCA will be able to choose;
- Provided rapid response to offices damaged or destroyed by the various disasters that occurred in FY 2004, including the Gentry County Service Center in Albany, Missouri, after two tornadoes ripped through on May 24, 2004, and several offices in Florida that suffered damage from Hurricane Charlie the week of August 16, 2004.

In FY 2004, we continued to enhance the SCA telecommunications capacity, with the award and implementation of the Cisco Router Upgrade contract, which includes the IOS upgrade (with Cisco Security Agent), Advanced Integration Module (AIM) replacement cards with AIM Version Pi2, and Advanced Service Engineering Support for the life of this

Technical Refresh Lease. We also actively participated in the evaluation and selection of the FTS 2001 vendor for the Universal Telecommunications Network (UTN) task, and established a Wireless Working Group to develop a strategic plan for implementing wireless technology in USDA. The Wireless Working Group is co-chaired by a CCE representative to ensure that CCE and SCA needs are properly addressed. An architecture sub-group was also established, with representation from each of the SCA.

We made additional investments in the three SCA web farms to provide high availability, secure and fully functional web services for internal and external customers. Related IT Infrastructure investments included completing the Phase II upgrade of the storage area network (SAN) technology, called the Enterprise Data Storage Architecture (EDARCH). This Phase II upgrade included acquisition of mid-tier Clariion equipment to provide an intermediate lower cost data storage option for enterprise storage. As EDARCH data storage becomes more integrated into the overall enterprise, additional storage equipment and monitoring software will be required to support increased data capacity requirements prior to being transitioned to operations and maintenance (O&M) status. With these investments, the CCE infrastructure now supports disaster recovery, fail-over, and load balancing, among other enhancements.

The three web farms hosted more than 350 applications plus over 100 static web sites for the SCA, and managed over 700 servers and a wide variety of associated software in support of customer and infrastructure applications. This software includes a comprehensive list of operating systems, web front end software, application software

and database management systems and commercial off the shelf (COTS) products. The web farms have also implemented the Shared Processes, Information, and Document Repository (SPIDR) system. This system is implemented using Magic Service Desk software and is used by the web farms to manage web farm work flow; track web farm inventory of hardware and software; and document web farm configurations. The same system is used by all three web farm locations making it easier for the web farms to act as a single entity. The web farms continued to provide increased support to developers by enhancing production-like development and test regions for smoother integration of new applications into the production environment.

The security of CCE information and technology remained a high priority in FY 2004. SCMI-IT staff enhanced the security controls of SCA systems and data, performed risk assessments, conducted penetration testing and developed common policies and training approaches. Specific activities included: 1) completing the Security Certification and Accreditation (C&A) activities for the four General Support Systems (GSS) – CCE Infrastructure, web farms, data centers, and telecommunications, which led to an interim Authority to Operate and finally full Authority to Operate from OCIO Cyber Security; 2) implementing Intrusion Detection Systems (IDS) on the CCE firewalls; 3) installing the Remote Insight Lights Out Edition II (RILOE II) cards on all the network servers for remote management. The addition of the RILOE II cards made monitors, keyboards and mice unnecessary on the servers, providing an enhanced level of physical security as one of the benefits; 4) continuing the quarterly reporting and remediation activities for the Federal Information Security Management Act or FISMA

Plan of Action and Milestones; and 5) providing a range of security training to SCA personnel.

For Geographical Information Systems (GIS) we made significant progress in: 1) completing nationwide ArcGIS I training for field staff, along with the course, "GIS for Program Managers", along with a variety of ESRI offerings; 2) digitizing Common Land Units (CLUs) for 2,250 counties (72%) and certified for 566 (18%), out of a total of 3,137. From a total of 2,865 counties or soil survey areas, soil surveys have been digitized for 2,009 counties or soil survey areas (70%) and certified for 1,875 (65%). Orthoimagery for all counties (replacement imagery) is being acquired annually for all of U.S. cropland areas through FSA/NRCS and other federal and state partners; and 3) releasing the National Soil Information System (NASIS), Version 5.2, making the Soil Data Warehouse and Soil Data Mart operational. With this release three new entities within the overall concept of NASIS was established – the Staging Server, the Soil Data Warehouse, and a Soil Data Mart. The purpose of the warehouse and data mart is to provide a single point of delivery of our official soil survey information, whether it is to the Electronic Field Office Technical Guide (eFOTG), Soil Survey Geographic (SSURGO) Database, Customer Service Toolkit, Technical Service Providers, or the general public. The eFOTG can be dynamically linked to a specific soil survey on the Soil Data Mart, reducing the workload and burden of management and maintenance of eFOTG for the current official soil survey data.

In addition to managing these technology enhancements, OCIO led the SCA Information Technology Convergence activities, which included: regular updates to the IT Convergence website, conducting numerous

meetings with Labor Relations, Human Resources, field advisory personnel, Unions, and Employee Associations on IT Convergence, and the Executive Project Manager giving updates on IT Convergence to State IT Leadership (NRCS State Conservationists, FSA State Executive Directors, and RD Directors), Agency Heads, and Conservation Districts, and developing brochures and guides summarizing the changes associated with convergence to be distributed to customer agencies and incoming staff prior to "Day One" of the ITS. Meetings were also conducted with the National Finance Center to ensure the transfer was as seamless as possible for employees.

A new fund type was created under the Department's Working Capital Fund to process obligations for ITS. Notifications to OMB and Congress were made to address the expansion of existing activities in the Working Capital Fund. An account code structure was added to the Financial System in the Working Capital Fund to support ITS and to provide information on levels of effort and costs in providing Service Levels.

Additionally, work was performed to transfer administrative resources such as telephone calling cards, cell phones, quality of life issues such as transit and other subsidies, and the instigation of purchase cards for the organization. A network of administrative contacts in each state group and large office was established to provide interim administrative support until additional administrative resources are obtained by the organization. Training was held for these administrative contacts to coordinate the following: time and attendance, input of Personnel Actions in a SF-52 system, and purchase card responsibilities. Training for the Administrative Coordinators

was held in Washington, DC the week of September 11, 2004, in Fort Collins the week of October 18 and Kansas City the week of October 25, 2004.

ITS entered into an agreement with the Bureau of Public Debt to provide full HR support to the new organization and also to provide support for a web-based time and attendance system. A preliminary stand-up agreement was executed for FY 2004 and an agreement subject to availability of funds was prepared for FY 2005. The Human Resources support will include Classification, Staffing and Recruitment, Employee and Labor Relations, Employee Benefits and Retirements, and Personnel Processing, Pay and Leave and WebTA Services (Time and Attendance).

The Executive Project Manager submitted the Reorganization package (DR-1010) proposing the convergence of the information technology (IT) staffs of the SCA into one IT organization within OCIO, which was approved by the Department. The OCIO selected Information Technology Services (ITS) as the name of the converged organization, which came into being on November 28, 2004. The ITS is in the process of transitioning responsibilities from a network of cross-agency teams that currently coordinate IT infrastructure investment within the SCA, enabling unified management of the IT infrastructure. The ITS is focused on the delivery of the following classes of technology services: Acquisition and Asset Management, Application Development and Deployment, Customer Support and End User Computing, Data Utility, Hosting, Security, Telecommunications and Web Services. A Service Level Agreement (SLA) that specifies performance metrics will be negotiated with the SCA for each class of service.

Over the next fiscal year the SCA will begin contracting with ITS for delivery of needed IT services. In the past, some agencies have carried the burden of cost and responsibility for Service Center IT support. The ITS cost reimbursement structure will create a level playing field for the SCA. The goal is for customers to only pay for the services they receive. Funding for ITS capital expenditures will continue to come from CCE appropriations.

The FY 2006 CCE budget request is for $142.465 million, an increase of $17.885 million over the FY 2005 enacted level, comprising:

- A net increase of $1,308,000 in CCE Basic Infrastructure, which will restore CCE basic infrastructure funding to a level needed to provide a stable level of service, while increasing web farm capacity.
- A net increase of $16,324,000 in the Farm Service Agency (FSA) Specific Funds. The FSA is in the middle of a multi-year modernization project to reengineer its legacy application systems in support of Service Center Modernization, Government Paperwork Elimination Act (GPEA), Freedom to E-File Act, and eGovernment. The goals of modernization are twofold; 1) to eliminate FSA's dependency on a proprietary and restrictive operating environment by developing applications that are platform independent and 2) to achieve a customer-centric focus providing ease of access and convenience to FSA customers.
- Natural Resources Conservation Service (NRCS) increase totaling $180,000. This increase will pay for increased telecommunications and related costs.

- Rural Development mission area increases totaling $2,817,000. This increase will allow for accomplishment of several important initiatives and upgrades for ITS web farms. The RD increase supports activities including the telecommunications support associated with Service Center modernization activities and the continued development and operation of the ITS web farms. RD has moved all of its major applications to the web. The common infrastructure integrates web services for RD customers, employees, and trading partners. The public will also be able to access more information and services online. Funds are requested for this initiative to provide the continued support, enhancement of the common infrastructure hosting all applications for RD, regular software and hardware maintenance and the daily costs for operations and security.
- The net decrease of $2,744,000 in the OCIO Interagency e-Gov Funds. More of the interagency e-Gov costs are becoming operational in nature and less infrastructure related. Therefore, the amount of interagency e-Gov costs borne by SCMI is decreasing. The e-Gov operational costs will be part of the service level agreements between the ITS and the Service Center Agencies.

With the new CCE infrastructure, the Agencies are reengineering their business processes and applications to deliver more efficient and enhanced services. SCA applications operate on the shared CCE infrastructure and provide streamlined services in a modern, customer oriented fashion that the legacy stove-piped technologies could not support. The full utilization of the infrastructure still depends upon: 1) how quickly agencies can develop and digitize the base data

needed to support GIS applications, and 2) the rate of conversion of current business applications to more integrated applications that take advantage of CCE shared systems and data.

Congressional support for the CCE initiative has been key to its success. As we move forward with ITS, Congressional support will remain critical. We will continue to communicate and work with Congress over the next several months as this organization continues to evolve.

Information Security

Mr. Chairman, for many years USDA has been remiss in its responsibility to meet all Federal information security requirements. To address this situation, this past year we initiated a program to certify and accredit all USDA critical systems. The Certification and Accreditation (C&A) process is the official management decision tool used to authorize the operation of an information system. It challenges executive program managers and technical staff at all levels to implement the most effective security controls and techniques. FISMA and OMB Circular A-130 require all Federal agencies, including USDA, to certify and accredit their systems. Within a single year, the Department improved its accreditation record from 13 percent to over 95 percent, an accomplishment for which we are very proud. This effort has improved our security plans, updated and corrected our security documentation, tested our networks and applications for security weaknesses, and successfully engaged our business organizations in the discipline of security management.

USDA IT security staffs are now in the process of addressing security issues that arose through our C&A activities. Action plans have been establish to mitigate specific security weaknesses and implement improved controls, and to meet the FISMA performance measures designed by OMB. Within the Office of the Chief Information Officer, we have established a rigorous process to track these corrective actions and ensure they are completed in a timely and efficient manner.

Recognizing that no set of security measures is completely effective, one of our major security initiatives for the current fiscal year is to test and improve our IT contingency plans. In the event of a major catastrophic event, natural or otherwise, we plan to be prepared to re-establish the automated processes upon which many or our most critical services and functions depend. To that end, we are working closely with our Continuity of Operations (COOP) and Homeland Security initiatives to build mutually reinforcing contingency strategies.

As USDA's Information Security program matures, automated tools are necessary to quickly and efficiently address cyber risks. We continue to provide our agency security staffs with monitoring devices and automated patching processes that assist in preventing disruption by intrusion or the introduction of malicious programs. During fiscal year 2005, we will deploy an improved incident tracking systems that will help us to better manage and report detected breaches and, we continue to maintain a rigorous security training and awareness program and require annual participation by all USDA and contract personnel.

Through good preventative planning, such as system certification and accreditation, combined with maturing the Department's overall operational response to security emergencies, we are reducing the risk associated with the electronic use and delivery of USDA information and services.

Electronic Government

Mr. Chairman, we continue to move aggressively to implement interagency and interdepartmental services to support common needs. The primary goals of our approach are to reduce costs and improve the quality of interactions with our customers.

For example, we deployed a reorganized USDA web site in January 2004 that presents the Department's information and services by topic rather than on an organizational basis (www.usda.gov). Customers may now easily locate information created by multiple agencies in one location rather than having to traverse multiple agency web sites. In addition, the site permits customers to customize the information that is presented when they log on to provide immediate access to the types of information they are most interested in retrieving. USDA continues to expand its common electronic authentication service that permits individuals to use a single credential (user name and password) to conduct electronic transactions across USDA, and soon, across the Federal Government. Seventy-five thousand USDA employees and 41,000 of our customers, principally those in the farming and ranching sector, had been credentialed using this service through January 2005. The service enables citizens, businesses, and employees to conduct their

private business in a secure online environment. We provided our employees with expanded development opportunities by deploying AgLearn, an enterprise-wide learning management system in March 2004. AgLearn provides employees around the world with access to a robust, competency-based library of courses; geographically disparate offices are now able to easily collaborate in developing learning services to meet common needs and reduce costs; and employees and managers have constant access to their training curriculum and training records. USDA brought farmers and ranchers unprecedented access to information about their transactions with two of the principal agencies that serve them by deploying an online customer statement. The service permits customers of the Farm Service Agency and the Natural Resources Conservation Service to electronically review their benefit and service transactions for farm program payments, farm loans, and conservation programs.

We are also leveraging the services offered by other Federal departments under the President's E-Government Initiatives. Key examples in this area include the consolidation of USDA disaster relief information with similar information from agencies across the Federal Government so that citizens and businesses may search for assistance in one place (DisasterHelp.gov). Government emergency managers also use this service to monitor disaster and national security events and coordinate responses among Federal, State, and private organizations, increasing the speed and quality of relief services. We provided new levels of assistance to exporters by consolidating USDA's export-related assistance and market information with similar information from our partners in the Federal and private sector. Now, in one location (export.gov), exporters may identify potential trading partners, access

multi-agency requirements for documenting, packaging, labeling, and shipping products overseas, locate the services and financing tools available from multiple agencies, and access a wide variety of market research reports to identify international business opportunities. We expanded opportunities for citizens and businesses to participate in the Federal regulatory process by working with our Federal partners to provide a single point of access to all Federal regulatory material (regulations.gov). Citizens and businesses may now easily locate, review, and provide comments on regulations in an extremely open and transparent manner. Scientists and the academic community now have access to a wide range of authoritative scientific information from sources across the Federal Government through science.gov. USDA publishes its technical reports, articles, conference proceedings, and research journals to this site for access worldwide. We streamlined the process of locating grant opportunities and applying for grants by working with our Federal partners to deploy a single access point for over 900 grant programs across the Federal Government. Citizens and businesses now have a simplified application process and reduced paperwork as the result of using electronic transaction processes. USDA helped citizens determine their eligibility for USDA benefits by incorporating pre-eligibility surveys onto a common government-wide web site (govbenefits.gov). Citizens are now able to save time associated with traveling to an office to determine if they qualify for benefits by completing the online survey in advance. USDA simplified citizen's access to government recreational facilities through its leadership in developing Recreation.Gov—the government's online service that provides a single point of access to accurate information about Federal recreation destinations and reservations.

Our enterprise approach prevented USDA agencies from making independent investments in multiple systems for each of these services and numerous others. This was a key factor in the $167 million reduction in its request for IT funds in fiscal year 2005. In addition, it greatly simplified the delivery of services to the public unifying information from services from across the government.

Enterprise Architecture

Mr. Chairman, USDA is managing its enterprise architecture as an enterprise-wide roadmap to achieve our mission within an efficient information technology environment. USDA's Enterprise Architecture Program identifies similar processes and opportunities to unify IT solutions across our agencies. Budget and performance initiatives have been evaluated and modeled to improve consistency across Departmental systems. Information on Federal and USDA e-Government architectures is being collected for easy dissemination throughout the Department. We are also assembling the data needed, at both the Departmental level and within individual agencies, to better organize and analyze all our business processes, information needs, and supporting technologies. Through the Enterprise Architecture Repository a shared view of the Department's current and future business and IT environment are available for USDA decision-makers to leverage IT services, avoid redundant IT investments, improve information security, and align technology and business processes more closely to the Federal Enterprise Architecture.

The USDA Enterprise Architecture Program complements the Department's IT Capital Planning and Investment Control (CPIC) process. USDA's central CPIC body reviews, monitors and approves all major IT

investments to ensure alignment with the Department's strategic goals and objectives. The enterprise architecture provides a formal basis for evaluating a single investment against other investments in terms of its contribution to enhanced delivery of customer services and opportunities for collaboration and reuse. In addition to strengthening the CPIC process, the EA will enable USDA to improve key Department-wide enterprise hardware, software, and service agreements.

IT Management

Mr. Chairman, we at USDA understand our responsibility to manage our IT assets and to ensure that major information technology investments are completed on time, and within scope and budget. To support these responsibilities, USDA established an IT Investment and Project Management training program. This program provides project managers and project staff project with the skills and competencies needed to ensure that all projects have a strong business case, meet organizational goals and are completed within their established cost and schedule goals.

This training covers Federal best practices such as capital planning and investment control, information assurance, project management (PM), enterprise architecture, acquisition, e-government, and telecommunications issues as well as the nine knowledge areas specified by the Project Management Institute (PMI) in the Project Management Body of Knowledge, the industry standard for project management training. At the end of the training, participants are eligible to take the examination administered by PMI for certification as a Project Management Professional (PMP). This training has provided us with a

growing number of PMI-certified project managers. Currently, USDA has 70 PMPs.

To supplement the five-week PM training, we have identified and delivered shorter classes to address more specific needs including: Earned Value Management, the Project Management Lifecycle (a high-level PM introduction) and Performance-Based Acquisition. These classes expand the level of understanding of PM concepts and ensure that the skills of our trained PMs are kept up to date.

We believe that all agencies can benefit from this training and that USDA staff benefit from understanding other agencies' experiences. In addition to USDA employees, we have trained staff from the Environmental Protection Agency, the Department of Treasury, the Department of Homeland Security and the Department of Education.

Conclusion

Mr. Chairman, as I mentioned earlier, we are working hard to use technology to transform service delivery to USDA customers while reducing costs. With the continued support of the Congress, I am confident that we will continue to be successful in achieving these objectives.